

Monthly Neuro Seminar Series

Spring 2026



Sam Sober PhD

*Professor
Department of Biology
Emory University*

Spiking codes for skilled motor control

Neurons coordinate muscle activity to produce an astonishing variety of behaviors. However, the neural basis of sensorimotor control remains mysterious due to a lack of experimental and computational tools. To address these challenges, my group combines neurophysiological, computational, and engineering approaches across species and behaviors. First, examining songbirds reveals how precise neuromuscular codes regulate expert vocal performance and emerge during development as young birds learn to sing. Second, we create electrode tools and analysis pipelines for examining muscle activity at cellular resolution (single motor units) in songbirds, insects, mice, rats, and primates. We disseminate these resources to globally via CAMBER (camber.emory.edu). Finally, our recent work on the neuromuscular control of mouse locomotion quantifies how the nervous system flexibly modulates limb movements across different terrains and walking speeds.

Tuesday, May 5
4:00 p.m.
Vet Med 2501



**UNIVERSITY OF
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